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INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/001765

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: F03C 1/053; F16H 21/20; F16C 3/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See below under "Electronic databases searched"

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPTO, AU : IPC : F16H 21/20; F16C 3/28

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
DWPI : IPC : F01B, F03C, F04B with keywords crankshaft, piston, vary+ stroke? And similar terms
F16H 21/20; F16C 3/28

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| X | DE 3936649A1 (VON INGELHEIM) 8 May 1991 | 1, 15, 16 |
| Y | The whole document | 2, 3 |
| Y | Derwent Abstract Accession No. 84-010498/02, Class Q51, SU 1002611A (KHARKOV POLY) 7 March 1983 Abstract and Figure | 2 |
| Y | Derwent Abstract Accession No. 93-376154/47, Class Q56, Q62, SU 1775007A3 (HYDRAULIC EQUIP CONS TECHN INST) 7 November 1992 Abstract and Figure | 3 |

Further documents are listed in the continuation of Box C

See patent family annex

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| • Special categories of cited documents: | |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "E" earlier application or patent but published on or after the international filing date | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
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| "O" document referring to an oral disclosure, use, exhibition or other means | "&" document member of the same patent family .." |
| "P" document published prior to the international filing date but later than the priority date claimed | |

Date of the actual completion of the international search
4 February 2005

Date of mailing of the international search report
10 FEB 2005

Name and mailing address of the ISA/AU
AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaaustralia.gov.au
Facsimile No. (02) 6285 3929

Authorized officer
ASANKA PERERA
Telephone No : (02) 6283 2373

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| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|---|---|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | Derwent Abstract Accession No. 94-063790/08, Class Q56, Q62, SU 1789750A1 (HYDRAULIC EQUIP CONS TECHN INST) 23 January 1993 Abstract and Figure | 1, 15, 16 |
| X | US 5588339A (DULGER) 31 December 1996 The whole document | 1, 15, 16 |
| X | Derwent Abstract Accession No. 1999-453525/38, Class Q56, JP 11190326A (TM JAPAN KK) 13 July 1999 Abstract and Figure | 1, 15, 16 |
| X | DE 3711729A1 (SMIDRKAL) 27 October 1988 The whole document | 1, 15, 16 |
| X | EP 0271456B1 (SIAPA S.p.A.) 15 June 1988 The whole document | 1, 15, 16 |
| A | GB 2219836A (HENIGES) 20 December 1989 Abstract and figure | 1-16 |
| A | Derwent Abstract Accession No. 94-365121/45, Class Q55, SU 1825399 A3 (TOMSK POLY) 30 June 1993 Abstract and Figure | 12 |

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Information on patent family members

International application No.

PCT/AU2004/001765

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document Cited in Search Report | | Patent Family Member | | | | | |
|---|----------|----------------------|----------|----|---------|----|---------|
| DE | 3936649 | | | | | | |
| US | 5588339 | CN | 1119715 | DE | 4332947 | JP | 7071364 |
| JP | 11190326 | | | | | | |
| DE | 3711729 | | | | | | |
| EP | 0271456 | | | | | | |
| GB | 2219836 | AU | 36008/89 | DE | 3919341 | FR | 2633012 |
| | | JP | 2042237 | SE | 8902226 | US | 4887560 |
| Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001. | | | | | | | |
| END OF ANNEX | | | | | | | |